

AMENDMENT

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IN THE CLAIMS

Please amend the claims as indicated below:

1. (Currently Amended) An optical fiber for transporting a beam of light from a laser light source and projecting the beam of light towards a target in an even illumination pattern, comprising:  
an input end for receiving the beam of light; and  
an exit end for projecting the beam of light towards the target,  
wherein the exit end has at least one diffractive optical pattern formed thereon, wherein said optical pattern provides an even illumination pattern across the target.
2. (Previously Presented) The optical fiber as described in claim 1, wherein the diffractive optical pattern is formed by one of the group selected from etching, molding and cutting.
3. (Previously Presented) The optical fiber as described in claim 1, wherein the diffractive optical pattern is one of a binary or multi-level diffractive pattern.
4. (Previously Presented) The optical fiber as described in claim 1, wherein the diffractive optical pattern is a continuous diffractive pattern.
5. (Previously Presented) The optical fiber as described in claim 1, wherein the exit end has a plurality of optical diffractive patterns incorporated thereon.
6. (Currently Amended) The optical fiber as described in claim 1, wherein the optical fiber is coupled ~~couple~~ to a laser emitting diode at the input end.
7. (Currently Amended) A system for recording images using a camera, comprising:

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at least one laser emitting diode; and  
at least one fiber optic coupled to a respective laser emitting diode at an input end thereof having an exit end with a diffractive optical pattern formed thereon,  
wherein laser light emitted from each laser emitting diode travels through a respective fiber optic and is projected onto a target after passing through the diffractive optical pattern to illuminate a portion of the target for recording images of the target, and said laser light provides an even illumination pattern across the target.

8. (Previously Presented) The system as described in claim 7, wherein the diffractive optical pattern creates a rectangular illumination pattern on the target.

9. (Previously Presented) The system as described in claim 7, wherein the system comprises a plurality of laser emitting diodes and a respective plurality of fiber optics.

10. (Previously Presented) The system as described in claim 9, wherein the exit ends of the fiber optics are arranged in a circular fashion around the camera.

11. (Currently Amended) The system ~~optical fiber~~ as described in claim 7, wherein the diffractive optical pattern is formed by one of the group selected from etching, molding and cutting.

12. (Currently Amended) The system ~~optical fiber~~ as described in claim 7, wherein the diffractive optical pattern is one of a binary or multi-level diffractive pattern.

13. (Currently Amended) The system ~~optical fiber~~ as described in claim 7, wherein the diffractive optical pattern is a continuous diffractive pattern.

14. (Currently Amended) The system ~~optical fiber~~ as described in claim 7, wherein

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there are a plurality of optical diffractive patterns on the exit end of each fiber optic.

15. (New) The system as described in claim 7, wherein said optical fiber is a multimode fiber.

16. (New) The optical fiber as described in claim 1, wherein said optical fiber is a multimode fiber.